

TABLE 2

	Wafers with 0.1 wt. % limonene as cyclodextrin complex	Wafers with 0.1% limonene (liquid)
Limonene content in the baked wafer	2533 ppm	755 ppm
Retention following baking	95%	38%
limonene-note (following storage)	3	0
Off-flavor	0	4
Sensorial description	fresh, citrus	flat, oxidized, rancid

The sensory evaluation of the flavor intensity of the limonene note and the off-flavor occurred following 4-month storage at 20° C., on a scale of from 0 (not detectable) to 5 (very strong).

The term retention (indicated in %) is in the present case understood to mean the weight based relationship of the amount of limonene in the wafer in comparison to the employed amount of limonene.

Example 18

Instant Soup

To a powder mixture comprising salt, starch, seasoning powder, fat powder and dried vegetable were added, for reinforcing the fresh green note, cis-3-hexenol-cyclodextrin particles, which were produced analogously to Example 1.

As a result of the employed particle size of 100 to 200 μm , the following properties were found during the mixing process: free of dust, low danger of coming out of mixture, good flowability.

During the storage, cis-3-hexenol in the cyclodextrin complex was well protected against oxidization, in particular on the basis of the low proportion of surface oil in the particles produced in accordance with the present invention.

Following pouring of the instant soup mixture into water at 80° C., the complex dissolves within a few seconds.

The invention claimed is:

1. A flavor or fragrance containing a cyclodextrin particle comprising said cyclodextrin particle and a flavor or fragrance,

wherein said cyclodextrin particle has 0.04% or less surface oil,

wherein said cyclodextrin particle has a particle size in a range of 50 to 1000 μm ,

wherein said cyclodextrin particle comprises cellulose ether,

wherein said cyclodextrin particle is obtained by a single stage fluidized bed process from a spray mixture, and wherein a gas introduction temperature is from 80 to 180° C. and a gas outlet temperature is from 40 to 95° C.

2. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said cellulose ether is selected from the group consisting of methylcellulose, ethylcellulose, ethylhydroxyethyl-cellulose, propyl-cellulose, hydroxyethylcellulose, hydroxypropylcellulose, hydroxypropylmethylcellulose, carboxymethylhydroxyethyl-cellulose, carboxy-methylcellulose enthalten, and mixtures thereof.

3. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said cellulose ether further comprises carboxymethylcellulose.

4. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said cyclodextrin particle has a particle size in the range from 100 to 300 μm .

5. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said fluidized bed process is a fluidized bed spray granulation process.

6. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said cyclodextrin particle is selected from the group consisting of alpha cyclodextrin, beta cyclodextrin, gamma cyclodextrin, and mixtures thereof.

7. The flavor or fragrance containing said cyclodextrin particle according to claim 6, wherein said cyclodextrin particle is beta cyclodextrin.

8. The flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein an amount of said flavor or said fragrance in said cyclodextrin particle is from 0.01 to 30 wt. %.

9. A product comprising a flavor or fragrance containing said cyclodextrin particle according to claim 1, wherein said product comprises consumables, pharmaceutical products, and everyday articles.

10. A process for producing the cyclodextrin particle according to claim 1, said method comprising:

spraying an aqueous spray mixture in a single stage fluidized bed device,

wherein said aqueous spray mixture comprises at least one cyclodextrin, at least one flavor or fragrance, and at least one cellulose ether.

11. The process according to claim 10, wherein a fluidized bed device is a fluidized bed spray granulation apparatus.

12. The process according to claim 10, wherein said aqueous spray is sprayed continuously.

13. The process according to claim 10, wherein the aqueous spray mixture comprises 40 to 95 wt. % water, 5 to 50 wt. % cyclodextrin, 0.0005 to 15 wt. % flavor or fragrance substance, and 0.1 to 6 wt. % cellulose ether.

14. The process according to claim 13, wherein the aqueous spray mixture contains 60 to 80 wt. % water, 15 to 30 wt. % cyclodextrin, 0.25 to 5 wt. % flavor or fragrance substance, and 0.2 to 2 wt. % cellulose ether.

15. The process according to claim 11, wherein a gas in circulated through the a single stage fluidized bed device, where a gas introduction temperature is from 80 to 180° C. and a gas outlet temperature is from 40 to 95° C.

16. A flavor or fragrance containing cyclodextrin particle comprising cyclodextrin, a flavor or fragrance, and a cellulose ether,

wherein said cyclodextrin particle has a 180 day oxidation sensitivity value of 0,

wherein said cyclodextrin particle has a particle size in a range of 50 to 1000 μm ,

wherein said cyclodextrin particle is obtained by a single stage fluidized bed process from a spray mixture, and wherein a gas introduction temperature is from 80 to 180° C. and a gas outlet temperature is from 40 to 95° C.